UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION

COMMSTECH LLC, Plaintiff, v. HEWLETT PACKARD ENTERPRISE COMPANY and ARUBA NETWORKS, INC., Defendants.	Case No. 6:19-cv-462 **COMPLAINT FOR PATENT INFRINGEMENT** **JURY TRIAL DEMANDED**

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff, Commstech LLC ("Commstech" or "Plaintiff"), hereby asserts the following claims for patent infringement against Defendants, Hewlett Packard Enterprise Company and Aruba Networks, Inc. (collectively "HPE" or "Defendants"), and alleges as follows:

SUMMARY

1. Commstech owns United States Patent Nos. 6,349,340, 7,769,028, and 7,990,860 (collectively, the "Patents-in-Suit").

2. HPE infringes the Patents-in-Suit by implementing, without authorization, Commstech's proprietary technologies in a number of their commercial networking products and related software (collectively referred to herein as the "Accused Products") including, *inter alia*, products that support the RFC 4607 specification related to "Source-Specific Multicast for IP" (*e.g.*, the HPE FlexFabric 5950 Switch Series, the HPE FlexFabric 5940 Switch Series, the HPE FlexFabric 5930 Switch Series, the HPE FlexFabric 5700 Switch Series, the HPE FlexFabric 5710 Switch Series, the HPE 5500 HI Switch Series, the HPE FlexFabric 12900 Series, the HPE FlexFabric 11900 Series, the HPE 6125XLG Blade Switch Series, the HPE

6127XLG Blade Switch Series, the HPE FlexNetwork 7500 Switch Series, the HPE FlexNetwork 10500 Switch Series, the HPE 5920 Switch Series, the HPE 5900 Switch Series, the HPE 5820X/5800 Switch Series, the HP 12500 Routing Switch Series, the HPE 10500 Switch Series, the HPE Apollo Ethernet 10/40GbE Switch, the HPE FlexNetwork HSR6800 Router, the HPE FlexNetwork MSR Router Series, the HPE VSR1000 Virtual Services Router, the HP 3600 Switch Series, the HP A7500 Switch Series, and the HP 6600/HSR6600 Routers), and products that operate with the "ArubaOS-Switch" software (*e.g.*, the Aruba 3810 Switch Series, the Aruba 3800 Switch Series, the Aruba 5400R zl2 Switch Series, the Aruba 2930M Switch Series, the Aruba 2930F Switch Series, and the Aruba 2920 Switch Series). *See, e.g.,* https://www.hpe.com/us/en/search-results.html?page=1&autocomplete=0&q=%22RFC%204607%22; ArubaOS-Switch Software Features Support Matrix 16.04, p. 3, *available at* https://support.hpe.com/hpsc/doc/public/display?docId=c04819731; Aruba 3810 / 5400R Advanced Traffic Management Guide for ArubaOS-Switch 16.05, p. 16, *available at* https://h20628.www2.hp.com/km-ext/kmcsdirect/emr_na-a00038722en_us-1.pdf.

3. By this action, Commstech seeks to obtain compensation for the harm Commstech has suffered as a result of HPE's infringement of the Patents-in-Suit.

NATURE OF THE ACTION

4. This is a civil action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq*.

5. HPE has infringed and continues to infringe, and at least as early as the filing and/or service of this Complaint, has induced and continues to induce infringement of, and has contributed to and continues to contribute to infringement of, at least one or more claims of

Commstech's Patents-in-Suit at least by making, using, selling, and/or offering to sell its products and services in the United States, including in this District.

6. Commstech is the legal owner by assignment of the Patents-in-Suit, which were duly and legally issued by the United States Patent and Trademark Office ("USPTO"). Commstech seeks monetary damages for HPE's infringement of the Patents-in-Suit.

THE PARTIES

7. Plaintiff Commstech LLC is a Texas limited liability company with its principal place of business at 1708 Harrington Dr., Plano, Texas 75075. Commstech is the owner of intellectual property rights at issue in this action.

8. On information and belief, Defendant Hewlett Packard Enterprise Company is a Delaware corporation with headquarters at 6280 America Center Drive, San Jose, California 95002. Defendant Hewlett Packard Enterprise Company is registered to do business in Texas.

9. On information and belief, Defendant Aruba Networks, Inc. is a Delaware corporation with headquarters at 3333 Scott Blvd, Santa Clara, California 95054. On information and belief, Defendant Aruba Networks, Inc. is a wholly-owned subsidiary of Defendant Hewlett Packard Enterprise Company.

10. On information and belief, HPE maintains at least one office in this District at 14231 Tandem Blvd, Austin, Texas 78728.

11. On information and belief, HPE directly and/or indirectly develops, designs, manufactures, distributes, markets, offers to sell and/or sells infringing products and services in the United States, including in the Western District of Texas, and otherwise directs infringing activities to this District in connection with its products and services.

JURISDICTION AND VENUE

12. As this is a civil action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq*., this Court has subject matter jurisdiction over the matters asserted herein under 28 U.S.C. §§ 1331 and 1338(a).

13. This Court has personal jurisdiction over HPE because HPE has (1) availed itself of the rights and benefits of the laws of the State of Texas, (2) transacted, conducted, and/or solicited business and engaged in a persistent course of conduct in the State of Texas (and in this District), (3) derived substantial revenue from the sales and/or use of products, such as the Accused Products, in the State of Texas (and in this District), (4) purposefully directed activities (directly and/or through intermediaries), such as shipping, distributing, offering for sale, selling, and/or advertising the Accused Products, at residents of the State of Texas (and residents in this District), (5) delivered Accused Products into the stream of commerce with the expectation that the Accused Products will be used and/or purchased by consumers in the State of Texas (and in this District), and (6) committed acts of patent infringement in the State of Texas (and in this District).

14. This Court also has personal jurisdiction over HPE because it is registered to do business in Texas and has a regular and established place of business in the Western District of Texas.

15. Venue is proper in this District under 28 U.S.C. § 1400(b).

PATENTS-IN-SUIT

U.S. Patent No. 6,349,340

16. U.S. Patent No. 6,349,340 ("the '340 Patent") is entitled "Data multicast channelization," and was issued on February 19, 2002. A true and correct copy of the '340 Patent is attached

as Exhibit A.

17. The '340 Patent was filed on January 13, 2000 as U.S. Patent Application No. 09/482,496.

18. Commstech is the owner of all rights, title, and interest in and to the '340 Patent, with the full and exclusive right to bring suit to enforce the '340 Patent, including the right to recover for past infringement.

19. The '340 Patent is valid and enforceable under United States Patent Laws.

20. The '340 Patent recognized several problems with existing high-speed network data distribution technology, such as multicast technology. Notably, the '340 Patent recognized that "[m]anagement of high-speed data across distributed data networks can involve two basic approaches," both of which have several drawbacks. Exhibit A at 1:32-33.

21. For instance, the '340 Patent recognized problems with a "more common approach" referred to as the "client-based" approach, where "client nodes notify server nodes of their interest in certain desired data," and the "servers can individually distribute data packets to each interested, subscribing client." *Id.* at 1:33-39. In this respect, the '340 Patent recognized that this "client-based" approach "tends to overburden the server as network demands grow." *Id.* at 1:30-41. In particular, the '340 Patent discloses that "as additional client nodes are added to the network, the server not only must individually distribute the data packets to each interested client node, but also the server must individually distribute the data packets to each additional subscribing client node," and thus, "as the client node list grows, so does the server's workload." *Id.* at 1:41-47.

22. The '340 Patent also recognized problems with another approach referred to as the "server-based" approach that uses multicast technology, in which "the server transmits the data packet to a multicast destination address identifying a particular multicast session," and

"[i]nterested client nodes merely subscribe to the multicast address, rather than the server, in order to receive the broadcast data." *Id.* at 1:48-58. However, the '340 Patent recognized that "because all client nodes receive each broadcast data packet, regardless of the content of the data packet, each client node must filter unwanted data upon receipt of each data packet," but "[c]lient nodes generally are uninterested in most of the broadcast data and, as a result, client nodes expend substantial processor resources identifying and discarding unwanted data packets." *Id.* at 1:54-2:4. Further, the '340 Patent recognized that, although these existing approaches "allow[ ] a server to provide data at high data transmission rates to more client[ ] nodes," these approaches can "limit the client node's ability to filter unwanted data packets" given the client node's "processor overhead." *Id.* at 2:7-11.

23. To address one or more shortcomings of existing high-speed network data distribution technology, such as existing multicast technology that "challeng[ed] the client node's ability to filter the unwanted data packets," the '340 Patent discloses, *inter alia*, a "method for efficient filtering of unwanted data in a multicast network environment" that "satisfies the long-felt need of the prior art by applying a combination hardware and software solution which selectively filters multicast data by selectively disabling channels containing unwanted data." *Id.* at 2:14-25. The '340 Patent's "inventive arrangements" have "advantages over all other data distribution methods" and provide "a novel and nonobvious method for receiving the benefits of multicasting while avoiding the drawbacks associated with such systems." *Id.* at 2:26-30.

24. Indeed, the inventions of the '340 Patent improved the functionality of "client" computers operating in a multicast network environment by reducing the "substantial processor resources" expended by "client" computers using existing data filtering mechanisms, such

as by reducing the resources expended by a "client" computer's "network applications software." Exhibit A at 6:9-47. In this respect, the inventions of the '340 Patent allow a "client" computer to "avoid excessive software filtering" that leads to "performance gain" that can be "significant." *Id.* at 10:21-31.

The Inventions Claimed in U.S. Patent No. 6,349,340 Improved Technology & Were Not Well-Understood, Routine, or Conventional

25. Given the state of the art at the time of the inventions of the '340 Patent, including the deficiencies in network data distribution systems of the time, the inventive concepts of the '340 Patent cannot be considered to be conventional, well-understood, or routine. *See, e.g.*, Exhibit A at 1:32-2:17. Indeed, there was a long-felt need in the art at the time of the inventions of the '340 Patent that the claimed inventions of the '340 Patent addressed. *See, e.g., id* at 2:20-26. In this respect, the '340 Patent discloses, among other things, an unconventional solution to problems arising in the context of network data distribution systems, namely, that "client" computers in such systems "expend[ed] substantial processor resources" filtering multicast data and this "processor overhead" inhibited the "client" computers' ability to handle the increasing user demands for network data distribution systems to broadcast more data. *See, e.g., id* at 2:1-17.

26. The inventions of the '340 Patent offered an unconventional, technological solution to such problems resulting in a "novel and nonobvious method for receiving the benefits of multicasting while avoiding the drawbacks associated with such [existing] systems." Exhibit A at 2:25-30; *see also, e.g., id.* at 10:21-26 ("The inventive multicast channelization strategy can increase the bandwidth available to the expanding client node base by distributing the broadcast data across multiple channels," such that "client nodes can selectively filter unwanted broadcast data within the network interface circuitry of each

client node."). In this respect, the inventions of the '340 Patent improved the functionality of "client" computers operating in a multicast network environment. *See, e.g.*, *id.* at 6:9-47, 10:21-31.

27. Indeed, it was not well-understood, routine, or conventional at the time of the inventions of the '340 Patent to perform the following functions, alone and/or in combination with one another: (i) selecting from among a plurality of multicast communications channels a source communications channel for receiving requested multicast data, (ii) enabling the selected source communications channel, (iii) receiving the requested multicast data through the enabled source communications channel, (iv) forwarding the requested multicast data to requesting processes, and (v) disabling the selected source communications channel when the requesting processes indicate that no further data is requested to be received over the selected source communications channel. *See, e.g.*, Exhibit A at Claims 1, 8, 14. Moreover, it was not well-understood, routine, or conventional at the time of the inventions of the '340 Patent to perform one or more of the following functions alone and/or in combination with one or more of the preceding functions: (i) receiving from one or more processes in a client node a request for multicast data, (ii) identifying a multicast data source for each requested data, and (iii) disabling an enabled selected source communications channel when the requesting client node process indicates that no further data is requested to be received from the identified multicast data source over the selected source communications channel and no other requesting client node processes have indicated a continuing need for further data to be received from the identified multicast data source over the selected source communications channel. *See, e.g.*, *id.* at Claims 1, 8, 14.

28. Further, it was not well-understood, routine, or conventional at the time of the inventions of the '340 Patent to perform one or more of the following functions alone and/or in combination with one or more of the unconventional functions set forth in paragraph number 25: (i) filtering, from multicast data received through an enabled source communications channel, unwanted/unrequested multicast data, (ii) discarding the unwanted/unrequested multicast data, and (ii) forwarding the filtered multicast data to one or more requesting processes. *See, e.g.*, Exhibit A at Claims 3, 9, 15.

29. These are just exemplary reasons why the inventions claimed in the '340 Patent were not well-understood, routine, or conventional at the time of the invention of the '340 Patent.

30. Consistent with the problems addressed by the '340 Patent being rooted in network data distribution systems, the '340 Patent's inventions naturally are also rooted in that same technology that cannot be performed solely with pen and paper or in the human mind. Indeed, using pen and paper or a human mind would not only ignore, but would run counter to, the stated technical solution of the '340 Patent noted above and the technical problems that the '340 Patent was specifically designed to address. Likewise, at least because the '340 Patent's claimed inventions address problems rooted in network data distribution systems, these inventions are not merely drawn to longstanding human activities.

U.S. Patent No. 7,769,028

31. U.S. Patent No. 7,769,028 ("the '028 Patent") is entitled "Systems and methods for adaptive throughput management for event-driven message-based data," and was issued on August 3, 2010. A true and correct copy of the '028 Patent is attached as Exhibit B.

32. The '028 Patent was filed on June 21, 2006 as U.S. Patent Application No. 11/471,923.

33. Commstech is the owner of all rights, title, and interest in and to the '028 Patent, with the

full and exclusive right to bring suit to enforce the '028 Patent, including the right to recover for past infringement.

34. The '028 Patent is valid and enforceable under United States Patent Laws.

35. The '028 Patent discloses, among other things, "a method for communicating data including prioritizing data by assigning a priority to the data, analyzing a network to determine a status of the network, and communicating data based at least in part on the priority of the data and the status of the network." Exhibit B at Abstract. The '028 Patent also discloses "Quality of Service (QoS)," which "refers to one or more capabilities of a network to provide various forms of guarantees with regard to data this is carried." *Id.* at 4:16-18. The '028 Patent states that "[t]he primary goal of QoS is to provide priority including dedicated bandwidth, controlled jitter and latency (required by some real-time and interactive traffic), and improved [data] loss characteristics." *Id.* at 4:27-31.

36. In discussing QoS, the '028 Patent recognized various shortcomings of existing QoS systems. As one example, the '028 Patent states that "[e]xisting QoS systems cannot provide QoS based on message content at the transport layer" of the Open Systems Interconnection (OSI) seven-layer protocol model. Exhibit B at 5:1-2. Indeed, the '028 Patent explains that the "Transmission Control Protocol (TCP)," which is a protocol at the transport layer, "requires several forms of handshaking and acknowledgements to occur in order to send data," and "[h]igh latency and [data] loss may result in TCP hitting time outs and not being able to send much, if any, meaningful data over [] a network." *Id.* at 1:57-60, 3:53-57. As another example, the '028 Patent states that "[c]urrent approaches to QoS often require every node in a network to support QoS, or at the very least, for every node in the network involved in a particular communication to support QoS," but such

approaches to QoS "do[] not scale well because of the large amount of state information that must be maintained at every node and the overhead associated with setting up such connections." *Id.* at 4:35-39, 4:46-49. As yet another example, the '028 Patent states that "[d]ue to the mechanisms existing QoS solutions utilize, messages that look the same to current QoS systems may actually have different priorities based on message content," but "data consumers may require access to high-priority data without being flooded by lower-priority data." *Id.* at 4:61-67.

37. In discussing the shortcomings of the prior art, the '028 Patent recognized that "[t]here is a need for systems and methods for providing QoS on the edge of a [] data network," and "a need for adaptive, configurable QoS systems and methods in a [] data network." Exhibit B at 5:17-20. The claimed inventions of the '028 Patent provide such systems and methods.

The Inventions Claimed in U.S. Patent No. 7,769,028 Improved Technology & Were Not Well-Understood, Routine, or Conventional

38. Given the state of the art at the time of the inventions of the '028 Patent, including the deficiencies with existing QoS systems for computer networks, the inventive concepts of the '028 Patent cannot be considered to be conventional, well-understood, or routine. *See, e.g.*, Exhibit B at 1:57-60, 3:53-57, 4:35-39, 4:46-49, 4:61-67, 5:1-2, 5:17-20. The '028 Patent discloses, among other things, an unconventional solution to problems arising in the context of communications networks that relied on existing QoS systems, namely, that such QoS systems did not scale, were not adaptive or configurable to different network types or architectures, and could not provide QoS based on message content at the transport layer, among other deficiencies. *See, e.g.*, *id.*

39. To address one or more deficiencies with existing QoS systems, the inventions of the '028 Patent offered a technological solution that facilitated providing an improved technique for

communicating data over a network, which helped to control jitter and latency and improve data loss, among other benefits. In particular, the inventions of the '028 Patent provided a specific, unconventional solution for prioritizing data as part of and/or at the top of the transport layer, dynamically changing rules for assigning priority to data, and communicating data based at least in part on the priority of the data and the status of the network. *See, e.g.*, *id.* at Claims 1, 13, 17; 7:29-31. In this respect, the inventions of the '028 Patent improved the technical functioning of computers and computer networks by reciting a specific technique for prioritizing data communications over a network. *See, e.g.*, *id.* at 4:11-37, 4:57-5:9.

40. Indeed, it was not well-understood, routine, or conventional at the time of the invention of the '028 Patent for a communication device to (i) prioritize data by assigning priority to data, where the prioritization occurs either as part of and/or at the top of the transport layer, (ii) analyze a network to determine a status of the network, (iii) select a mode based on the status of the network, (iv) change rules for assigning priority to the data based on the mode, and (v) communicate the data based at least in part on the priority of the data and the status of the network, where the data is communicated at a transmission rate metered based at least in part on the status of the network. *See, e.g.*, Exhibit B at Claim 1. Moreover, it was not well-understood, routine, or conventional at the time of the invention of the '028 Patent for a communication device to receive the data at a node on the edge of the network. *See, e.g.*, Exhibit B at Claim 5. It was also not well-understood, routine, or conventional at the time of the invention of the '028 Patent for a communication device to receive the data at least in part from an application program and/or communicate the data to an application program. *See, e.g.*, *id.* at Claims 6, 12. Further, it was not well-understood, routine, or

conventional at the time of the invention of the '028 Patent for a communication device to assign the priority to the data based at least in part on message content of the data, protocol information of the data, or a user defined rule. *See, e.g.*, *id.* at Claims 7-9.

41. Additionally, it was not well-understood, routine, or conventional at the time of the invention of the '028 Patent for a communication system to include (i) a data prioritize component adapted to assign a priority to data, where the prioritization occurs either as part of and/or at the top of the transport layer, (ii) a network analysis component adapted to determine a status of the network, (iii) a mode selection component adapted to select a mode based at least on the status of the network, and (iv) a data communications component adapted to communicate the data based at least in part on the priority of the data and the status of the network, where the data prioritization component is adapted to assign priority to the data based on prioritization rules that are selected based on a selected mode, and where the data is communicated at a transmission rate metered based at least in part on the status of the network. *See, e.g.*, Exhibit B at Claims 13, 17. It was also not well-understood, routine, or conventional at the time of the invention of the '028 Patent for a communication system to include a data organization component adapted to organize the data with respect to other data based at least in part on the priority of the data. *See, e.g.*, *id.* at Claim 14.

42. These are just exemplary reasons why the inventions claimed in the '028 Patent were not well-understood, routine, or conventional at the time of the invention of the '028 Patent.

43. Consistent with the problems addressed being rooted in QoS systems for computer networks, the '028 Patent's inventions naturally are also rooted in that same technology that cannot be performed solely with pen and paper or in the human mind. Indeed, using

pen and paper or a human mind would not only ignore, but would run counter to, the stated technical solution of the '028 Patent noted above and the technical problems that the '028 Patent was specifically designed to address. Likewise, at least because the '028 Patent's claimed inventions address problems rooted in QoS systems for computer networks, these inventions are not merely drawn to longstanding human activities.

U.S. Patent No. 7,990,860

44. U.S. Patent No. 7,990,860 ("the '860 Patent") is entitled "Method and system for rule-based sequencing for QoS," and was issued on August 2, 2011. A true and correct copy of the '860 Patent is attached as Exhibit C.

45. The '860 Patent was filed on June 16, 2006 as U.S. Patent Application No. 11/454,220.

46. Commstech is the owner of all rights, title, and interest in and to the '860 Patent, with the full and exclusive right to bring suit to enforce the '860 Patent, including the right to recover for past infringement.

47. The '860 Patent is valid and enforceable under United States Patent Laws.

48. The '860 Patent discloses, among other things, "a method for communicating data over a network to provide Quality of Service," including "prioritizing the data, and communicating the data based at least in part on the priority." Exhibit C at Abstract. According to the '860 Patent, "Quality of Service (QoS)" "refers to one or more capabilities of a network to provide various forms of guarantees with regard to data that is carried." *Id.* at 4:16-18. The '860 Patent states that "[t]he primary goal of QoS is to provide priority including dedicated bandwidth, controlled jitter and latency (required by some real-time and interactive traffic), and improved [data] loss characteristics." *Id.* at 4:27-32.

49. Like the '028 Patent, the '860 Patent recognized various shortcomings of existing QoS

systems. As one example, the '860 Patent states that "[e]xisting QoS systems cannot provide QoS based on message content at the transport layer" of the Open Systems Interconnection (OSI) seven-layer protocol model. Exhibit C at 5:2-3. Indeed, the '860 Patent explains that the "Transmission Control Protocol (TCP)," which is a protocol at the transport layer, "requires several forms of handshaking and acknowledgements to occur in order to send data," and "[h]igh latency and [data] loss may result in TCP hitting time outs and not being able to send much, if any, meaningful data over [] a network." *Id.* at 1:57-60, 3:53-57. As another example, the '860 Patent states that "[c]urrent approaches to QoS often require every node in a network to support QoS, or at the very least, for every node in the network involved in a particular communication to support QoS," but such approaches to QoS "do[] not scale well because of the large amount of state information that must be maintained at every node and the overhead associated with setting up such connections." *Id.* at 4:36-39, 4:47-50. As yet another example, the '860 Patent states that "[d]ue to the mechanisms existing QoS solutions utilize, messages that look the same to current QoS systems may actually have different priorities based on message content," but "data consumers may require access to high-priority data without being flooded by lower-priority data." *Id.* at 4:64-5:1.

50. In discussing the shortcomings of the prior art, the '860 Patent recognized that "[t]here is a need for systems and methods for providing QoS on the edge of a [] data network," and "a need for adaptive, configurable QoS systems and methods in a [] data network." Exhibit C at 5:19-22. The claimed inventions of the '860 Patent provide such systems and methods.

The Inventions Claimed in U.S. Patent No. 7,990,860 Improved Technology & Were Not Well-Understood, Routine, or Conventional

51. Given the state of the art at the time of the inventions of the '860 Patent, including the

deficiencies with existing QoS systems for computer networks, the inventive concepts of the '860 Patent cannot be considered to be conventional, well-understood, or routine. *See, e.g.*, Exhibit C at 1:57-60, 3:53-57, 4:36-39, 4:47-50, 4:64-5:2, 5:19-22. The '860 Patent discloses, among other things, an unconventional solution to problems arising in the context of communications networks that relied on existing QoS systems, namely, that such QoS systems did not scale, were not adaptive or configurable to different network types or architectures, and could not provide QoS based on message content at the transport layer, among other deficiencies. *See, e.g.*, *id.*

52. To address one or more deficiencies with existing QoS systems, the inventions of the '860 Patent offered a technological solution that facilitated providing an improved technique for communicating data over a network, which helped to control jitter and latency and improve data loss, among other benefits. In particular, the inventions of the '860 Patent provided a specific, unconventional solution for prioritizing data as part of and/or at the top of the transport layer by sequencing the data based at least in part on a user defined rule. *See, e.g.*, *id.* at Abstract, Claims 1, 13, 17. In this respect, the inventions of the '860 Patent improved the technical functioning of computers and computer networks by reciting a specific technique for prioritizing data communications over a network. *See, e.g.*, *id.* at 4:11-37, 4:57-5:9.

53. Indeed, it was not well-understood, routine, or conventional at the time of the invention of the '860 Patent for a communication device to include (i) a network analysis component configured to determine a network status from a plurality of network statuses based on analysis of network measurements, and determine at least one of an effective link speed and a link proportion for at least one link, (ii) a mode selection component configured to

select a mode from a plurality of modes that corresponds with at least one of the plurality of network statuses based on the determined network status, where each of the plurality of modes comprises a user defined sequencing rule, (iii) a data prioritization component configured to operate at a transport layer of a protocol stack and prioritize the data by assigning a priority to the data, where the prioritization component includes a sequencing component configured to sequence the data based at least in part on the user defined sequencing rule of the selected mode, (iv) a data metering component configured to meter inbound data by shaping the inbound data at the data communications system for the at least one link, and meter outbound data by policing the outbound data at the data communications system for the at least one link, and (v) a data communication component configured to communicate the data based at least in part on the priority of the data, the effective link speed, and/or the link proportion. *See, e.g.*, Exhibit C at Claims 1, 15, 20.

54. Moreover, it was not well-understood, routine, or conventional at the time of the invention of the '860 Patent for the user defined sequencing rule mentioned above to be dynamically reconfigurable. *See, e.g.*, Exhibit C at Claim 5. It was also not well-understood, routine, or conventional at the time of the invention of the '860 Patent for a communication device to receive the data at least in part from an application program operating on the node, or pass the data at least in part to an application program operating on the node. *See, e.g.*, *id.* at Claims 6, 12. Further, it was not well-understood, routine, or conventional at the time of the invention of the '860 Patent for a communication device to prioritize the data by differentiating the data based at least in part on message content, protocol information, or a user defined differentiation rule. *See, e.g.*, *id.* at Claims 8-11.

55. These are just exemplary reasons why the inventions claimed in the '860 Patent were not

well-understood, routine, or conventional at the time of the invention of the '860 Patent.

56. Consistent with the problems addressed being rooted in QoS systems for computer networks, the '860 Patent's inventions naturally are also rooted in that same technology that cannot be performed solely with pen and paper or in the human mind. Indeed, using pen and paper or a human mind would not only ignore the stated technical solution of the '860 Patent noted above and the technical problem that the '860 Patent was specifically designed to address. Likewise, at least because the '860 Patent's claimed inventions address problems rooted in QoS systems for computer networks, these inventions are not merely drawn to longstanding human activities.

COUNT I: INFRINGEMENT OF U.S. PATENT NO. 6,349,340

57. Commstech incorporates by reference and re-alleges paragraphs 16-30 of this Complaint as if fully set forth herein.

58. HPE has infringed and is infringing, either literally or under the doctrine of equivalents, the '340 Patent in violation of 35 U.S.C. § 271 *et seq.*, directly and/or indirectly, by making, using, offering for sale, or selling in the United States, and/or importing into the United States without authority or license, products that support the RFC 4607 specification related to "Source-Specific Multicast for IP" (*e.g.*, the HPE FlexFabric 5950 Switch Series, the HPE FlexFabric 5940 Switch Series, the HPE FlexFabric 5930 Switch Series, the HPE FlexFabric 5700 Switch Series, the HPE FlexFabric 5710 Switch Series, the HPE 5500 HI Switch Series, the HPE FlexFabric 12900 Series, the HPE FlexFabric 11900 Series, the HPE 6125XLG Blade Switch Series, the HPE 6127XLG Blade Switch Series, the HPE FlexNetwork 7500 Switch Series, the HPE FlexNetwork 10500 Switch Series, the HPE 5920 Switch Series, the HPE 5900 Switch Series, the HPE 5820X/5800 Switch Series, the

HP 12500 Routing Switch Series, the HPE 10500 Switch Series, the HPE Apollo Ethernet 10/40GbE Switch, the HPE FlexNetwork HSR6800 Router, the HPE FlexNetwork MSR Router Series, the HPE VSR1000 Virtual Services Router, the HP 3600 Switch Series, the HP A7500 Switch Series, and the HP 6600/HSR6600 Routers) (collectively referred to herein as the "Accused '340 Products"), that infringe at least one or more claims of the '340 Patent. *See, e.g.,* https://www.hpe.com/us/en/search-results.html?page=1&autocomplete=0&q=%22RFC%204607%22 (disclosing search results for specifications and manuals of HPE network switches and routers that support RFC 4607).

59. As just one non-limiting example, set forth below (with claim language in bold and italics) is exemplary evidence of infringement of Claim 1 of the '340 Patent in connection with the Accused '340 Products. This description is based on publicly available information. Commstech reserves the right to modify this description, including, for example, on the basis of information about the Accused '340 Products that it obtains during discovery.

1(a): A method for receiving requested multicast data over a plurality of multicast communications channels comprising:—HPE makes, uses, sells, and/or offers to sell a device or system that practices the method of receiving requested multicast data over a plurality of multicast communications channels in accordance with Claim 1. For instance, the Accused '340 Products support the RFC 4607 specification related to "Source-Specific Multicast for IP" that discloses the method recited in Claim 1. *See, e.g.,* https://www.hpe.com/us/en/search-results.html?page=1&autocomplete=0&q=%22RFC%204607%22; https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-c03800356&docLocale=en_US (expressly disclosing "RFC 4607"). In particular, RFC 4607 defines a "source-specific multicast service" ("SSM") as "[a] datagram sent with source IP address

S and destination IP address G in the SSM range [that] is delivered to each host socket that has specifically requested delivery of datagrams sent by S to G, and only to those sockets." Holbrook, Source-specific multicast for IP, RFC 4607 (2006), p. 5, *available at* https://tools.ietf.org/pdf/rfc4607.pdf.

1(b): selecting from among the plurality of multicast communications channels a source communications channel for receiving said requested multicast data;—HPE makes, uses, sells, and/or offers to sell a device or system that selects from among the plurality of multicast communications channels a source communications channel for receiving said requested multicast data. For instance, the Accused '340 Products support the RFC 4607 specification, which discloses a plurality of multicast communication channels, where each "channel is identified (addressed) by the combination of a unicast source address and a multicast destination address in the SSM range" (*e.g.*, "S, G = (192.0.2.1, 232.7.8.9)," "S, G = (192.0.2.2, 232.7.8.9)"). Holbrook, Source-specific multicast for IP, RFC 4607 (2006), p. 6, *available at* https://tools.ietf.org/pdf/rfc4607.pdf; *see also, e.g., id.* at pp. 3-4 ("The network service identified by (S,G), for SSM address G and source host address S, is referred to as a 'channel'"); *id.* at p. 6 ("We use the term 'channel' to refer to the service associated with an SSM address," and "[a] channel is identified by the combination of an SSM destination address and a specific source, *e.g.*, an (S,G) pair."). In particular RFC 4607 discloses that "[t]he IP module interface to upper-layer protocols is extended to allow a socket to 'Subscribe' to . . . a particular channel identified by an SSM destination address and a source IP address." *Id.* at p. 5; *see also, e.g., id.* at p. 6 ("The receiver operations allowed on a channel are called 'Subscribe (S,G)' and 'Unsubscribe (S,G)'"); *id.* at p. 7 ("If reception of the same channel is desired on multiple interfaces, Subscribe is invoked

once for each"); *id.* at p. 8 ("An incoming datagram destined to an SSM address MUST be delivered by the IP module to all sockets that have indicated (via Subscribe) a desire to receive data that matches the datagram's source address, destination address, and arriving interface.").

1(c): enabling said selected source communications channel;—HPE makes, uses, sells, and/or offers to sell a device or system that enables the selected source communications channel. For instance, the Accused '340 Products support the RFC 4607 specification, which discloses that "[t]he IP module interface to upper-layer protocols is extended to allow a socket to 'Subscribe' to . . . a particular channel identified by an SSM destination address and a source IP address," and subscribing to a particular channel comprises selecting a source communications channel and also enabling the selected source communications channel. Holbrook, Source-specific multicast for IP, RFC 4607 (2006), p. 5, *available at* https://tools.ietf.org/pdf/rfc4607.pdf; *see also, e.g., id.* at p. 6 ("The receiver operations allowed on a channel are called 'Subscribe (S,G)' and 'Unsubscribe (S,G)'"); *id.* at p. 7 ("If reception of the same channel is desired on multiple interfaces, Subscribe is invoked once for each"); *id.* at p. 8 ("An incoming datagram destined to an SSM address MUST be delivered by the IP module to all sockets that have indicated (via Subscribe) a desire to receive data that matches the datagram's source address, destination address, and arriving interface.").

1(d): receiving said requested multicast data through said enabled source communications channel;—HPE makes, uses, sells, and/or offers to sell a device or system that receives the requested multicast data through the enabled source communications channel. For instance, the Accused '340 Products support the RFC 4607

specification, which discloses that "[a]n incoming datagram destined to an SSM address MUST be delivered by the IP module to all sockets that have indicated (via Subscribe) a desire to receive data that matches the datagram's source address, destination address, and arriving interface." Holbrook, Source-specific multicast for IP, RFC 4607 (2006), p. 8, *available at* https://tools.ietf.org/pdf/rfc4607.pdf; *see also, e.g., id.* ("When the first socket on host H subscribes to a channel (S,G) on interface I, the host IP module on H sends a request on interface I to indicate to neighboring routers that the host wishes to receive traffic sent by source S to source-specific multicast destination G.").

1(e): forwarding said requested multicast data to requesting processes; and,—HPE makes, uses, sells, and/or offers to sell a device or system that forwards the requested multicast data to requesting processes. For instance, as noted above, the Accused '340 Products support the RFC 4607 specification, which discloses that "[a]n incoming datagram destined to an SSM address MUST be delivered by the IP module to all ***sockets*** that have indicated (via Subscribe) a desire to receive data that matches the datagram's source address, destination address, and arriving interface." Holbrook, Source-specific multicast for IP, RFC 4607 (2006), p. 8, *available at* https://tools.ietf.org/pdf/rfc4607.pdf (emphasis added); *see also, e.g., id.* ("When the first socket on host H subscribes to a channel (S,G) on interface I, the host IP module on H sends a request on interface I to indicate to neighboring routers that the host wishes to receive traffic sent by source S to source-specific multicast destination G."). In particular, RFC 4607 defines a "socket" as "an implementation-specific parameter used to distinguish among different requesting entities (*e.g.*, programs or processes or communication end-points within a program or process) within the requesting host." *Id.* at p. 5.

1(f): disabling said selected source communications channel when said requesting processes indicate that no further data is requested to be received over said selected source communications channel.—HPE makes, uses, sells, and/or offers to sell a device or system that disables the selected source communications channel when the requesting processes indicate that no further data is requested to be received over the selected source communications channel. For instance, the Accused '340 Products support the RFC 4607 specification, which discloses that "[t]he IP module interface to upper-layer protocols is extended to allow a socket to . . . 'Unsubscribe' from a particular channel identified by an SSM destination address and a source IP address," and unsubscribing from a particular channel disables the particular channel to indicate that no further data is requested to be received over the particular channel. Holbrook, Source-specific multicast for IP, RFC 4607 (2006), p. 5, *available at* https://tools.ietf.org/pdf/rfc4607.pdf; *see also, e.g., id.* at p. 8 (disclosing that "[a]n incoming datagram destined to an SSM address MUST be delivered by the IP module to all sockets that have indicated (via Subscribe) a desire to receive data that matches the datagram's source address, destination address, and arriving interface," but "MUST NOT be delivered to other sockets" (*e.g.*, sockets that have Unsubscribed)). Indeed, as noted above, RFC 4607 discloses that "'interface' is a local identifier of the network interface on which reception of the channel identified by the (source-address, group-address) pair is to be enabled [*e.g.*, subscribed] or ***disabled*** [*e.g.*, unsubscribed]." *Id.* at p. 7 (emphasis added).

60. Additionally, HPE has been and/or currently is an active inducer of infringement of the '340 Patent under 35 U.S.C. § 271(b) and a contributory infringer of the '340 Patent under 35 U.S.C. § 271(c).

61. HPE knew of the '340 Patent, or at least should have known of the '340 Patent, but was willfully blind to its existence. On information and belief, HPE has had actual knowledge of the '340 Patent since at least as early as the filing and/or service of this Complaint.

62. HPE has provided the Accused '340 Products to its customers and, on information and belief, instructions to use the Accused '340 Products in an infringing manner while being on notice of (or willfully blind to) the '340 Patent and HPE's infringement. Therefore, on information and belief, HPE knew or should have known of the '340 Patent and of its own infringing acts, or deliberately took steps to avoid learning of those facts.

63. HPE knowingly and intentionally encourages and aids at least its end-user customers to directly infringe the '340 Patent.

64. HPE's end-user customers directly infringe at least one or more claims of the '340 Patent by using the Accused '340 Products in their intended manner to infringe. HPE induces such infringement by providing the Accused '340 Products and instructions to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '340 Patent. On information and belief, HPE specifically intends that its actions will result in infringement of one or more claims of the '340 Patent, or subjectively believe that their actions will result in infringement of the '340 Patent, but took deliberate actions to avoid learning of those facts, as set forth above.

65. Additionally, HPE contributorily infringes at least one or more claims of the '340 Patent by providing the Accused '340 Products and/or software components thereof, that embody a material part of the claimed inventions of the '340 Patent, that are known by HPE to be specially made or adapted for use in an infringing manner, and are not staple articles with substantial non-infringing uses. The Accused '340 Products are specially designed to

infringe at least one or more claims of the '340 Patent, and their accused components have no substantial non-infringing uses. In particular, on information and belief, the software modules and code that implement and perform the infringing functionalities identified above are specially made and adapted to carry out said functionality and do not have any substantial non-infringing uses.

66. At least as early as the filing and/or service of this Complaint, HPE's infringement of the '340 Patent was and continues to be willful and deliberate, entitling Commstech to enhanced damages.

67. Additional allegations regarding HPE's knowledge of the '340 Patent and willful infringement will likely have evidentiary support after a reasonable opportunity for discovery.

68. HPE's infringement of the '340 Patent is exceptional and entitles Commstech to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

69. Commstech is in compliance with any applicable marking and/or notice provisions of 35 U.S.C. § 287 with respect to the '340 Patent.

70. Commstech is entitled to recover from HPE all damages that Commstech has sustained as a result of HPE's infringement of the '340 Patent, including, without limitation, a reasonable royalty.

COUNT II: INFRINGEMENT OF U.S. PATENT NO. 7,769,028

71. Commstech incorporates by reference and re-alleges paragraphs 31-43 of this Complaint as if fully set forth herein.

72. HPE has infringed and is infringing, either literally or under the doctrine of equivalents, the '028 Patent in violation of 35 U.S.C. § 271 *et seq.*, directly and/or indirectly, by making,

using, offering for sale, or selling in the United States, and/or importing into the United States without authority or license, products that operate with the "ArubaOS-Switch" software, which supports various Aruba switches, including the Aruba 3810 Switch Series, the Aruba 3800 Switch Series, the Aruba 5400R zl2 Switch Series, the Aruba 2930M Switch Series, the Aruba 2930F Switch Series, and the Aruba 2920 Switch Series (collectively referred to herein as the "Accused '028 Products"), that infringe at least one or more claims of the '028 Patent. *See, e.g.,* ArubaOS-Switch Software Features Support Matrix 16.04, p. 3, *available at* https://support.hpe.com/hpsc/doc/public/display?docId=c04819731; Aruba 3810 / 5400R Advanced Traffic Management Guide for ArubaOS-Switch 16.05, p. 16, *available at* https://h20628.www2.hp.com/km-ext/kmcsdirect/emr_na-a00038722en_us-1.pdf.

73. As just one non-limiting example, set forth below (with claim language in bold and italics) is exemplary evidence of infringement of Claim 17 of the '028 Patent in connection with the Accused '028 Products. This description is based on publicly available information. Commstech reserves the right to modify this description, including, for example, on the basis of information about the Accused '028 Products that it obtains during discovery.

17(a): A non-transitory computer-readable medium including a set of instructions for execution on a computer, the set of instructions including:— HPE makes, uses, sells, and/or offers to sell a non-transitory computer-readable medium including a set of instructions for execution on a computer that include the functions recited in Claim 17. For instance, the Accused '028 Products that operate with the ArubaOS-Switch software support "Quality of Service (QoS) prioritization," which is used to "classify and prioritize traffic throughout a network," and helps "establish an end-to-end traffic-priority policy to

improve the control and throughput of important data." Aruba 3810 / 5400R Advanced Traffic Management Guide for ArubaOS-Switch 16.05, p. 249, *available at* https://h20628.www2.hp.com/km-ext/kmcsdirect/emr_na-a00038722en_us-1.pdf; *see also, e.g.,* https://buy.hpe.com/b2c/us/en/networking/switches/modular-ethernet-switches/5400-zl-switch-products/aruba-5400r-zl2-switch-series/p/7074783 (disclosing "Dynamic Quality of Service (QoS)" as one of the "[k]ey [f]eatures"); https://www.arubanetworks.com/assets/ds/DS_5400Rzl2SwitchSeries.pdf ("Advanced classifier-based QoS classifies traffic using multiple match criteria based on Layer 2, 3, and 4 information; applies QoS policies such as setting priority level and rate limit to selected traffic on a per-port or per-VLAN basis").

17(b): a data prioritization routine configured to assign a priority to data, wherein the prioritization occurs at least one of: in a transport layer of a network communications protocol stack of a data communication system, and at a top of the transport layer of the network communications protocol stack of the data communication system;—HPE makes, uses, sells, and/or offers to sell a non-transitory computer-readable medium including a set of instructions comprising a data prioritization routine configured to assign a priority to data, where the prioritization occurs at least in a transport layer of a network communications protocol stack of a data communication system (i.e., Layer 4). For instance, the Accused '028 Products that operate with the ArubaOS-Switch software include a data prioritization routine configured to assign a priority to data. *See, e.g.,* Aruba 3810 / 5400R Advanced Traffic Management Guide for ArubaOS-Switch 16.05, p. 249, *available at* https://h20628.www2.hp.com/km-ext/kmcsdirect/emr_na-a00038722en_us-1.pdf ("Quality of Service is used to classify and prioritize traffic throughout a network.

QoS enables you to establish an end-to-end traffic-priority policy to improve the control and throughput of important data."), *id.* at p. 249 (disclosing that QoS can be used to "[s]et priority policies in edge switches in your network to enable traffic-handling rules across the network"); *id.* at pp. 250-51 ("QoS enables you to . . . [s]pecify which traffic has higher or lower priority . . ."); *id.* at p. 251 ("Classifier-based QoS policies are designed to work with existing globally-configured, switch-wide QoS settings . . ."); *id.* at p. 320 ("When a globally-configured IP-device address has the highest precedence in the switch for traffic addressed to or from the device, traffic received on the switch with the configured IP address is marked with the specified priority level."). According to HPE, the prioritization of data occurs at least at the transport layer of the network communications protocol stack (*e.g.*, Layer 4). *See, e.g.*, *id.* at p. 253 (disclosing that "[w]hen multiple, global QoS classifiers are configured, a switch uses the highest-to-lowest search order . . . to identify the highest-precedence classifier to apply to any given packet," where the highest precedence is given to "UDP/TCP application type (port)"); *id.* at p. 317 ("When you use TCP or UDP and a Layer 4 Application port number as a global QoS classifier, traffic carrying thespecified TCP/UDP port numbers is marked with a specified priority level . . ."); *id.* at p. 319 ("Figure 59" disclosing "priority assignments on TCP/UDP ports"); *id.* at p. 252 (disclosing that "[g]lobally configured packet classification criteria include . . . "Layer 4 Source and Destination UDP/TCP application port" and "[c]lassifier-based match criteria on inbound IPv4/IPv6 traffic include . . . "Layer 4 Source and Destination UDP/TCP application port"); https://www.arubanetworks.com/assets/ds/DS_5400Rzl2 SwitchSeries.pdf ("Advanced classifier-based QoS classifies traffic using multiple match criteria based on Layer 2, 3, and 4 information"); ArubaOS-Switch Software Features

Support Matrix 16.04, p. 3, *available at* https://support.hpe.com/hpsc/doc/public/display?docId=c04819731 (disclosing support for "Layer 4 TCP/UDP Packet Priority").

17(c): a network analysis routine configured to determine a status of a network;—HPE makes, uses, sells, and/or offers to sell a non-transitory computer-readable medium including a set of instructions comprising a network analysis routine configured to determine a status of a network. For instance, the Accused '028 Products that operate with the ArubaOS-Switch software include a network analysis routine configured to determine whether inbound traffic exceeds a specified amount of bandwidth. Aruba 3810 / 5400R Advanced Traffic Management Guide for ArubaOS-Switch 16.05, p. 257, *available at* https://h20628.www2.hp.com/km-ext/kmcsdirect/emr_na-a00038722en_us-1.pdf. In this respect, the network analysis routine is configured to determine a status of a network. *See also, e.g., id.* at p. 249 ("When network congestion occurs, it is important to move traffic on the basis of relative importance."), ("Quality of Service is used to classify and prioritize traffic throughout a network. . . . You can manage available bandwidth so that the most important traffic goes first."); *id.* at p. 299 ("When 10 Mbps ports on a switch are configured in QoS for eight outbound queues (the default), and the guaranteed minimum bandwidth is set for 5 Mbps or less for a given queue, then packets in the lower-priority queues may be discarded on ports that are oversubscribed for extended periods of time."); *id.* at p. 251 ("You can use multiple match criteria to more finely select and define the classes of traffic that you want to manage. QoS policy actions determine how you can handle the selected traffic."); *id.* at p. 254 ("[Y]ou can configure multiple match criteria that search multiple fields in packet headers to select the exact traffic you want to rate limit

or prioritize for a port or VLAN interface."); *id.* at p. 300 ("Evaluate the types of traffic in your network and identify the traffic types that you want to prioritize or rate limit.").

17(d): a mode selection routine configured to select at least one mode based at least in part on the status of the network; and;—HPE makes, uses, sells, and/or offers to sell a non-transitory computer-readable medium including a set of instructions comprising a mode selection routine configured to select at least one mode based at least in part on the status of the network. For instance, the Accused '028 Products that operate with the ArubaOS-Switch software include a mode selection routine configured to select at least one mode based at least in part on the status of the network. Aruba 3810 / 5400R Advanced Traffic Management Guide for ArubaOS-Switch 16.05, p. 249, *available at* https://h20628.www2.hp.com/km-ext/kmcsdirect/emr_na-a00038722en_us-1.pdf ("Quality of Service is used to classify and prioritize traffic throughout a network. . . . You can manage available bandwidth so that the most important traffic goes first."); *id.* at p. 251 ("QoS configuration supports a classifier-based model that provides added functionality to create and manage QoS policies across a network consisting of switches, OEM and legacy devices."), ("The classifier-based configuration model is a single, simplified procedure and command syntax for cross-feature usage, which offers . . . Finer granularity than globally-configured QoS for classifying IPv4 and IPv6 traffic . . . The application of QoS policies to inbound traffic flows on specific port and VLAN interfaces (instead of using only globally-configured, switch-wide QoS settings)"); *id.* at p. 254 ("By using classifier-based QoS, you can configure multiple match criteria that search multiple fields in packet headers to select the exact traffic you want to rate limit or prioritize for a port or VLAN interface. A classifier-based QoS policy is especially useful when you want

to manage different types of traffic in the same way (for example, to prioritize both IP subnet and voice traffic)."); *id.* at p. 411 ("Once the traffic is selected, you can further manage it. Classifier-based service policies take precedence over, and may override, globally configured settings.").

17(e): a data communications routine configured to communicate the data based at least in part on the priority of the data and the status of the network, the data prioritization routine being configured to assign priority to the data based on prioritization rules, wherein the prioritization rules are selected based upon the selected mode, wherein the data is communicated at a transmission rate metered based at least in part on the status of the network.—HPE makes, uses, sells, and/or offers to sell a non-transitory computer-readable medium including a set of instructions comprising a data communications routine configured to communicate the data based at least in part on the priority of the data and the status of the network, where the data prioritization component is configured to assign priority to the data based on prioritization rules that are selected based upon the selected at least one mode, and where the data is communicated at a transmission rate metered based at least in part on the status of the network. For instance, the Accused '028 Products that operate with the ArubaOS-Switch software includes such a data communications routine and data prioritization component. *See, e.g.,* Aruba 3810 / 5400R Advanced Traffic Management Guide for ArubaOS-Switch 16.05, p. 249, *available at* https://h20628.www2.hp.com/km-ext/kmcsdirect/emr_na-a00038722en_us-1.pdf ("Quality of Service is used to classify and prioritize traffic throughout a network. QoS enables you to establish anend-to-end traffic-priority policy to improve the control and throughput of important data."); *id.* at p. 254 ("By using classifier-based QoS, you can

configure multiple match criteria that search multiple fields in packet headers to select the exact traffic you want to rate limit or prioritize for a port or VLAN interface. A classifier-based QoS policy is especially useful when you want to manage different types of traffic in the same way (for example, to prioritize both IP subnet and voice traffic)."); *id.* at p. 445 ("To identify the packets that belong to a traffic class for further processing by policy actions, use match and ignore commands in a class configuration . . . As soon as a field in a packet header matches the criteria in a match statement, the sequential comparison of match criteria in the class stops, and the policy actions configured for the class are executed on the packet."). According to HPE, the data is communicated at a transmission rate metered based at least in part on the status of the network. *See, e.g., id.* at p. 254 ("By using classifier-based QoS, you can configure multiple match criteria that search multiple fields in packet headers to select the exact traffic you want to rate limit or prioritize for a port or VLAN interface. A classifier-based QoS policy is especially useful when you want to manage different types of traffic in the same way (for example, to prioritize both IP subnet and voice traffic)."); *id.* at p. 257 (disclosing that "[r]ate limiting . . . [e]nables a port or VLAN interface to allow only the specified amount of bandwidth to be used for inbound traffic," and "[w]hen traffic exceeds the configured limit, it is dropped."); *id.* at p. 272 (disclosing an example that "shows how to configure a rate limiting policy for TCP/UDP application streams and apply the policy on all inbound switch ports."); *id.* at p. 441 ("The Classifier feature introduces . . . [a]dditional policy actions, such as rate limiting and IP precedence marking, to manage selected traffic.").

74. Additionally, Defendant HPE has been and/or currently is an active inducer of infringement of the '028 Patent under 35 U.S.C. § 271(b) and a contributory infringer of the '028 Patent

under 35 U.S.C. § 271(c).

75. HPE knew of the '028 Patent, or at least should have known of the '028 Patent, but was willfully blind to its existence. On information and belief, HPE has had actual knowledge of the '028 Patent since at least as early as the filing and/or service of this Complaint.

76. HPE has provided the Accused '028 Products to its customers and, on information and belief, instructions to (i) use the Accused '028 Products in an infringing manner and/or (ii) make an infringing device, while being on notice of (or willfully blind to) the '028 Patent and HPE's infringement. Therefore, on information and belief, HPE knew or should have known of the '028 Patent and of its own infringing acts, or deliberately took steps to avoid learning of those facts.

77. HPE knowingly and intentionally encourages and aids at least its end-user customers to directly infringe the '028 Patent.

78. HPE's end-user customers directly infringe at least one or more claims of the '028 Patent by using the Accused '028 Products in their intended manner to infringe. HPE induces such infringement by providing the Accused '028 Products and instructions to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '028 Patent. On information and belief, HPE specifically intends that its actions will result in infringement of one or more claims of the '028 Patent, or subjectively believe that their actions will result in infringement of the '028 Patent, but took deliberate actions to avoid learning of those facts, as set forth above.

79. Additionally, HPE contributorily infringes at least one or more claims of the '028 Patent by providing the Accused '028 Products and/or software components thereof, that embody a material part of the claimed inventions of the '028 Patent, that are known by HPE to be

specially made or adapted for use in an infringing manner, and are not staple articles with substantial non-infringing uses. The Accused '028 Products are specially designed to infringe at least one or more claims of the '028 Patent, and their accused components have no substantial non-infringing uses. In particular, on information and belief, the software modules and code that implement and perform the infringing functionalities identified above are specially made and adapted to carry out said functionality and do not have any substantial non-infringing uses.

80. At least as early as the filing and/or service of this Complaint, HPE's infringement of the '028 Patent was and continues to be willful and deliberate, entitling Commstech to enhanced damages.

81. Additional allegations regarding HPE's knowledge of the '028 Patent and willful infringement will likely have evidentiary support after a reasonable opportunity for discovery.

82. HPE's infringement of the '028 Patent is exceptional and entitles Commstech to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

83. Commstech is in compliance with any applicable marking and/or notice provisions of 35 U.S.C. § 287 with respect to the '028 Patent.

84. Commstech is entitled to recover from HPE all damages that Commstech has sustained as a result of HPE's infringement of the '028 Patent, including, without limitation, a reasonable royalty.

COUNT III: INFRINGEMENT OF U.S. PATENT NO. 7,990,860

85. Commstech incorporates by reference and re-alleges paragraphs 44-56 of this Complaint as if fully set forth herein.

86. HPE has infringed and is infringing, either literally or under the doctrine of equivalents, the '860 Patent in violation of 35 U.S.C. § 271 *et seq.*, directly and/or indirectly, by making, using, offering for sale, or selling in the United States, and/or importing into the United States without authority or license, products that operate with the "ArubaOS-Switch" software, which supports various Aruba switches, including the Aruba 3810 Switch Series, the Aruba 3800 Switch Series, the Aruba 5400R zl2 Switch Series, the Aruba 2930M Switch Series, the Aruba 2930F Switch Series, and the Aruba 2920 Switch Series (collectively referred to herein as the "Accused '860 Products"), that infringe at least one or more claims of the '860 Patent. *See, e.g.,* ArubaOS-Switch Software Features Support Matrix 16.04, p. 3, *available at* https://support.hpe.com/hpsc/doc/public/display?docId=c04819731; Aruba 3810 / 5400R Advanced Traffic Management Guide for ArubaOS-Switch 16.05, p. 16, *available at* https://h20628.www2.hp.com/km-ext/kmcsdirect/emr_na-a00038722en_us-1.pdf.

87. As just one non-limiting example, set forth below (with claim language in bold and italics) is exemplary evidence of infringement of Claim 15 of the '860 Patent in connection with the Accused '860 Products. This description is based on publicly available information. Commstech reserves the right to modify this description, including, for example, on the basis of information about the Accused '860 Products that it obtains during discovery.

15(a): A processing device for communicating data, the processing device including:—

HPE makes, uses, sells, and/or offers to sell a processing device for communicating data in accordance with Claim 15. For instance, the Accused '860 Products that operate with the ArubaOS-Switch software support "Quality of Service (QoS) prioritization," which is used to "classify and prioritize traffic throughout a network," and helps "establish an end-

to-end traffic-priority policy to improve the control and throughput of important data." Aruba 3810 / 5400R Advanced Traffic Management Guide for ArubaOS-Switch 16.05, p. 249, *available at* https://h20628.www2.hp.com/km-ext/kmcsdirect/emr_na-a00038722en_us-1.pdf; *see also, e.g.*, https://buy.hpe.com/b2c/us/en/networking/switches/modular-ethernet-switches/5400-zl-switch-products/aruba-5400r-zl2-switch-series/p/7074783 (disclosing "Dynamic Quality of Service (QoS)" as one of the "[k]ey [f]eatures"); https://www.arubanetworks.com/assets/ds/DS_5400Rzl2SwitchSeries.pdf ("Advanced classifier-based QoS classifies traffic using multiple match criteria based on Layer 2, 3, and 4 information; applies QoS policies such as setting priority level and rate limit to selected traffic on a per-port or per-VLAN basis").

***15(b): a network analysis component of the processing device configured to: determine a network status from a plurality of network statuses based on analysis of network measurements, and*—**HPE makes, uses, sells, and/or offers to sell a processing device that comprises a network analysis component configured to determine a network status from a plurality of network statuses based on analysis of network measurements. For instance, the Accused '860 Products that operate with the ArubaOS-Switch software include a network analysis component configured to determine whether inbound traffic exceeds a specified amount of bandwidth. Aruba 3810 / 5400R Advanced Traffic Management Guide for ArubaOS-Switch 16.05, p. 257, *available at* https://h20628.www2.hp.com/km-ext/kmcsdirect/emr_na-a00038722en_us-1.pdf. In this respect, the network analysis component is configured to determine a network status from a plurality of network statuses based on analysis of network measurements. *See also, e.g., id.* at p. 249 ("When network congestion occurs, it is important to move traffic on the basis of relative importance."),

("Quality of Service is used to classify and prioritize traffic throughout a network. . . . You can manage available bandwidth so that the most important traffic goes first."); *id.* at p. 299 ("When 10 Mbps ports on a switch are configured in QoS for eight outbound queues (the default), and the guaranteed minimum bandwidth is set for 5 Mbps or less for a given queue, then packets in the lower-priority queues may be discarded on ports that are oversubscribed for extended periods of time."); *id.* at p. 251 ("You can use multiple match criteria to more finely select and define the classes of traffic that you want to manage. QoS policy actions determine how you can handle the selected traffic."); *id.* at p. 254 ("[Y]ou can configure multiple match criteria that search multiple fields in packet headers to select the exact traffic you want to rate limit or prioritize for a port or VLAN interface."); *id.* at p. 300 ("Evaluate the types of traffic in your network and identify the traffic types that you want to prioritize or rate limit.").

15(c): a network analysis component of the processing device configured to: determine at least one of an effective link speed and a link proportion for at least one link;—HPE makes, uses, sells, and/or offers to sell a processing device that comprises a network analysis component configured to determine at least one of an effective link speed and a link proportion for at least one link. For instance, the Accused '860 Products that operate with the ArubaOS-Switch software include a network analysis component configured to determine an effective link speed and/or a link proportion for at least one link. *See, e.g.*, Aruba 3810 / 5400R Advanced Traffic Management Guide for ArubaOS-Switch 16.05, p. 249, *available at* https://h20628.www2.hp.com/km-ext/kmcsdirect/emr_na-a00038722 en_us-1.pdf ("A Quality of Service (QoS) network policy refers to the network-wide controls available to . . . [e]nsure uniform and efficient traffic-handling throughout your

network, while keeping the most important traffic moving at an acceptable speed, regardless of current bandwidth usage."), ("You can manage available bandwidth so that the most important traffic goes first."); *id.* at p. 96 ("Alternatively, leaving this setting at the default (auto) allows the switch to calculate the path-cost from the link speed"); *id.* at p. 125 ("[T]he switch calculates the path cost from the link speed."). Moreover, according to HPE, traffic data is communicated at a transmission rate metered based at least in part on the network status. *See, e.g., id.* at p. 254 ("By using classifier-based QoS, you can configure multiple match criteria that search multiple fields in packet headers to select the exact traffic you want to rate limit or prioritize for a port or VLAN interface. A classifier-based QoS policy is especially useful when you want to manage different types of traffic in the same way (for example, to prioritize both IP subnet and voice traffic)."); *id.* at p. 257 (disclosing that "[r]ate limiting . . . [e]nables a port or VLAN interface to allow only the specified amount of bandwidth to be used for inbound traffic," and "[w]hen traffic exceeds the configured limit, it is dropped."); *id.* at p. 272 (disclosing an example that "shows how to configure a rate limiting policy for TCP/UDP application streams and apply the policy on all inbound switch ports.");*id.* at p. 441 ("The Classifier feature introduces . . . [a]dditional policy actions, such as rate limiting and IP precedence marking, to manage selected traffic."). In this respect, the Accused '860 Products that operate with the ArubaOS-Switch software are configured to determine an effective link speed and/or a link proportion for at least one link.

15(d): a mode selection component of the processing device configured to select a mode from a plurality of modes based on the determined network status, wherein each of the plurality of modes corresponds with at least one of the plurality of network statuses,

wherein each of the plurality of modes comprises a user defined sequencing rule,—HPE makes, uses, sells, and/or offers to sell a processing device that comprises a mode selection component configured to select a mode from a plurality of modes based on the determined network status, where each of the plurality of modes corresponds with at least one of the plurality of network statuses, and where each of the plurality of modes comprises a user defined sequencing rule. For instance, the Accused '860 Products that operate with the ArubaOS-Switch software include a mode selection component configured to select at least one mode based at least in part on the status of the network. Aruba 3810 / 5400R Advanced Traffic Management Guide for ArubaOS-Switch 16.05, p. 249, *available at* https://h20628.www2.hp.com/km-ext/kmcsdirect/emr_na-a00038722en_us-1.pdf ("Quality of Service is used to classify and prioritize traffic throughout a network. . . . You can manage available bandwidth so that the most important traffic goes first."); *id.* at p. 251 ("QoS configuration supports a classifier-based model that provides added functionality to create and manage QoS policies across a network consisting of switches, OEM and legacy devices."), ("The classifier-based configuration model is a single, simplified procedure and command syntax for cross-feature usage, which offers . . . Finer granularity than globally-configured QoS for classifying IPv4 and IPv6 traffic . . . The application of QoS policies to inbound traffic flows on specific port and VLAN interfaces (instead of using only globally-configured, switch-wide QoS settings)"); *id.* at p. 254 ("By using classifier-based QoS, you can configure multiple match criteria that search multiple fields in packet headers to select the exact traffic you want to rate limit or prioritize for a port or VLAN interface. A classifier-based QoS policy is especially useful when you want to manage different types of traffic in the same way (for example, to prioritize both IP

subnet and voice traffic)."); *id.* at p. 411 ("Once the traffic is selected, you can further manage it. Classifier-based service policies take precedence over, and may override, globally configured settings."). HPE discloses that a given mode comprises a sequencing rule defined by a user. *See, e.g., id.* at p. 249 ("Quality of Service is used to classify and prioritize traffic throughout a network. . . . ***You can manage*** available bandwidth so that the most important traffic goes first.") (emphasis added); *id.* at p. 254 ("By using classifier-based QoS, ***you can configure*** multiple match criteria that search multiple fields in packet headers to select the exact traffic you want to rate limit or prioritize for a port or VLAN interface. A classifier-based QoS policy is especially useful when you want to manage different types of traffic in the same way (for example, to prioritize both IP subnet and voice traffic).") (emphasis added); *id.* at p. 411 ("***Once the traffic is selected, you can further manage it.*** Classifier-based service policies take precedence over, and may override, globally configured settings.") (emphasis added).

15(e): a data prioritization component of the processing device configured to prioritize data by assigning a priority to the data, wherein the prioritization component includes a sequencing component configured to sequence the data based at least in part on the user defined sequencing rule of the selected mode;— HPE makes, uses, sells, and/or offers to sell a processing device that comprises a data prioritization component configured to prioritize data by assigning a priority to the data, where the prioritization component includes a sequencing component configured to sequence the data based at least in part on the user defined sequencing rule of the selected mode. For instance, the Accused '860 Products that operate with the ArubaOS-Switch software include such a data prioritization component. *See, e.g.,* Aruba 3810 / 5400R Advanced Traffic Management Guide for

ArubaOS-Switch 16.05, p. 249, *available at* https://h20628.www2.hp.com/km-ext/kmcsdirect/emr_na-a00038722en_us-1.pdf ("Quality of Service is used to classify and prioritize traffic throughout a network. QoS enables you to establish an end-to-end traffic-priority policy to improve the control and throughput of important data."), *id.* at p. 249 (disclosing that QoS can be used to "[s]et priority policies in edge switches in your network to enable traffic-handling rules across the network"); *id.* at pp. 250-51 ("QoS enables you to . . . [s]pecify which traffic has higher or lower priority . . ."); *id.* at p. 251 ("Classifier-based QoS policies are designed to work with existing globally-configured, switch-wide QoS settings . . ."); *id.* at p. 320 ("When a globally-configured IP-device address has the highest precedence in the switch for traffic addressed to or from the device, traffic received on the switch with the configured IP address is marked with the specified priority level."). Indeed, the Accused '860 Products that operate with the ArubaOS-Switch software include a sequencing component configured to sequence the data based at least in part on the user defined sequencing rule of the selected mode. *See, e.g., id.* at pp. 249-250 ("[Y]ou can use Quality of Service to . . . [c]hange the priorities of traffic from various segments of your network as your business needs change[, and s]et priority policies in edge switches in your network to enable traffic-handling rules across the network."); *id.* at p. 411 ("Using multiple match criteria, you can finely selectand define the classes of traffic that you want to manage. You can then use policy actions to determine how the selected traffic is handled."); *id.* at p. 322 ("Table 31" disclosing "[o]rder of precedence for classifier-based QoS over global QoS"); *id.* at p. 315 ("When QoS is used to prioritize traffic, different kinds of traffic can be assigned to different egress queues."); https://www.arubanetworks.com/assets/ds/DS_5400Rzl2SwitchSeries.pdf ("Traffic

prioritization allows real-time traffic classification into eight priority levels mapped to eight queues").

15(f): a data metering component of the processing device configured to: meter inbound data by shaping the inbound data for the at least one link, and meter outbound data by policing the outbound data for the at least one link; and — HPE makes, uses, sells, and/or offers to sell a processing device that comprises a data metering component configured to meter inbound data by shaping the inbound data for the at least one link, and meter outbound data by policing the outbound data for the at least one link. For instance, the Accused '860 Products that operate with the ArubaOS-Switch software include a data metering component configured to meter inbound data by shaping the inbound data for the at least one link. *See, e.g.,* Aruba 3810 / 5400R Advanced Traffic Management Guide for ArubaOS-Switch 16.05, p. 443, *available at* https://h20628.www2.hp.com/km-ext/kmcsdirect/emr_na-a00038722en_us-1.pdf ("Traffic class-based software configuration consists of the following general steps . . . 1. Determine the inbound traffic you want to manage and how you want to manage it. For example, you may want to rate limit certain traffic, prioritize it, mirror it, and so on."); *id.* at p. 249 ("A Quality of Service (QoS) network policy refers to the network-wide controls available to . . . [e]xercise control over the priority settings of inbound traffic arriving in and travelling through your network."); *id.* at p. 253 (mentioning "[r]ate limiting inbound traffic on port and VLAN interfaces"); *id.* at p. 257 (disclosing that "Rate limiting" "[e]nables a port or VLAN interface to allow only the specified amount of bandwidth to be used for inboundtraffic. When traffic exceeds the configured limit, it is dropped."); *see also, e.g.,* https://www.arubanetworks.com/techdocs/ArubaOS_63_Web_Help/Content/ArubaFrame

Styles/ARM/Traffic_Shaping.htm ("In a mixed-client network, it is possible for slower clients to bring down the performance of the whole network. To solve this problem and ensure fair access to all clients independent of their WLAN or IP stack capabilities, an AP can implement the traffic shaping feature . . . The bw-alloc parameter of a traffic management profile allows you to set a minimum bandwidth to be allocated to a virtual AP profile when there is congestion on the wireless network."); https://community.arubanetworks.com/t5/Wired-Intelligent-Edge-Campus/Traffic-Shaping-on-2930F/td-p/312734 (disclosing that "traffic shaping" feature is supported); Traffic Policing Technical White Paper, p. 4, *available at* https://community.arubanetworks.com/aruba/attachments/aruba/CampusSwitching/4275/1/Traffic_Policing.pdf (disclosing an example egressed queue with respect to Figure 1); Aruba 3810 / 5400R Management and Configuration Guide for ArubaOSSwitch 16.08, p. 221, *available at* https://community.arubanetworks.com/aruba/attachments/aruba/CampusSwitching/5302/1/ATM%2016_08%20for%205400_3810.pdf ("All-traffic rate-limiting applies to both inbound and outbound traffic and can be specified either in terms of a percentage of total bandwidth or in terms of bits per second"). The Accused '860 Products that operate with the ArubaOS-Switch software also include a data metering component configured to meter outbound data by policing the outbound data for the at least one link. *See, e.g.,* Traffic Policing Technical White Paper, p. 6, *available at* https://community.arubanetworks.com/aruba/attachments/aruba/CampusSwitching/4275/1/Traffic_Policing.pdf (disclosing that "Traffic Policing" is supported on "ArubaOS-Switch software version 16.06."); *id.* at p. 1 ("This traffic flow is associated with a policy command that is enhanced to allow the user to specify a meter with the rates and actions. .

. . You can implement Traffic Policing in all three layers (core, distribution, and access) to protect against excessive traffic."), ("ArubaOS-Switch already have a Single Rate Marker which rate limits any incoming/outgoing traffic . . ."); *id.* at p. 4 (disclosing an example egressed queue with respect to Figure 1); s*ee also, e.g.,* Aruba 3810 / 5400R Advanced Traffic Management Guide for ArubaOS-Switch 16.05, p. 443, *available at* https://h20628.www2.hp.com/km-ext/kmcsdirect/emr_na-a00038722en_us-1.pdf (disclosing that "rate-limit kbps" command "[c]onfigures the maximum transmission rate for matching packets in a specified traffic class," and "[a]ll packets that exceed the configured limit are dropped."); Aruba 3810 / 5400R Management and Configuration Guide for ArubaOSSwitch 16.08, p. 221, *available at* https://community.arubanetworks.com/aruba/attachments/aruba/CampusSwitching/5302/1/ATM%2016_08%20for%205400_3810.pdf ("All-traffic rate-limiting applies to both inbound and outbound traffic and can be specified either in terms of a percentage of total bandwidth or in terms of bits per second").

15(g): a data communication component of the processing device configured to communicate the data based at least in part on at least one of: the priority of the data, the effective link speed, and the link proportion;—HPE makes, uses, sells, and/or offers to sell a processing device that comprises a data communication component configured to communicate the data based at least in part on the priority of the data, the effective link speed, and/or the link proportion. For instance, the Accused '860 Products that operate with the ArubaOS-Switch software include such a data communications component. *See, e.g.,* Aruba 3810 / 5400R Advanced Traffic Management Guide for ArubaOS-Switch 16.05, p. 249, *available at* https://h20628.www2.hp.com/km-ext/kmcsdirect/emr_na-

a00038722en_us-1.pdf ("Quality of Service is used to classify and prioritize traffic throughout a network. QoS enables you to establish anend-to-end traffic-priority policy to improve the control and throughput of important data."); *id.* at p. 254 ("By using classifier-based QoS, you can configure multiple match criteria that search multiple fields in packet headers to select the exact traffic you want to rate limit or prioritize for a port or VLAN interface. A classifier-based QoS policy is especially useful when you want to manage different types of traffic in the same way (for example, to prioritize both IP subnet and voice traffic)."); *id.* at p. 445 ("To identify the packets that belong to a traffic class for further processing by policy actions, use match and ignore commands in a class configuration . . . As soon as a field in a packet header matches the criteria in a match statement, the sequential comparison of match criteria in the class stops, and the policy actions configured for the class are executed on the packet.").

15(h): wherein at least the data prioritization component is configured to operate at a transport layer of a protocol stack.—HPE discloses that the data prioritization component is configured to operate at a transport layer of a protocol stack (i.e., Layer 4). *See, e.g.*, *id.* at p. 253 (disclosing that "[w]hen multiple, global QoS classifiers are configured, a switch uses the highest-to-lowest search order . . . to identify the highest-precedence classifier to apply to any given packet," where the highest precedence is given to "UDP/TCP application type (port)"); *id.* at p. 317 ("When you use TCP or UDP and a Layer 4 Application port number as a global QoS classifier, traffic carrying the specified TCP/UDP port numbers is marked with a specified priority level . . ."); *id.* at p. 319 ("Figure 59" disclosing "priority assignments on TCP/UDP ports"); *id.* at p. 252 (disclosing that "[g]lobally configured packet classification criteria include . . . "Layer 4 Source and

Destination UDP/TCP application port" and "[c]lassifier-based match criteria on inbound IPv4/IPv6 traffic include . . . "Layer 4 Source and Destination UDP/TCP application port"); https://www.arubanetworks.com/assets/ds/DS_5400Rzl2SwitchSeries.pdf ("Advanced classifier-based QoS classifies traffic using multiple match criteria based on Layer 2, 3, and 4 information"); ArubaOS-Switch Software Features Support Matrix 16.04, p. 3, *available at* https://support.hpe.com/hpsc/doc/public/display?docId=c04819731 (disclosing support for "Layer 4 TCP/UDP Packet Priority").

88. Additionally, Defendant HPE has been and/or currently is an active inducer of infringement of the '860 Patent under 35 U.S.C. § 271(b) and a contributory infringer of the '860 Patent under 35 U.S.C. § 271(c).

89. HPE knew of the '860 Patent, or at least should have known of the '860 Patent, but was willfully blind to its existence. On information and belief, HPE has had actual knowledge of the '860 Patent since at least as early as the filing and/or service of this Complaint.

90. HPE has provided the Accused '860 Products to its customers and, on information and belief, instructions to use the Accused '860 Products in an infringing manner while being on notice of (or willfully blind to) the '860 Patent and HPE's infringement. Therefore, on information and belief, HPE knew or should have known of the '860 Patent and of its own infringing acts, or deliberately took steps to avoid learning of those facts.

91. HPE knowingly and intentionally encourages and aids at least its end-user customers to directly infringe the '860 Patent.

92. HPE's end-user customers directly infringe at least one or more claims of the '860 Patent by using the Accused '860 Products in their intended manner to infringe. HPE induces such infringement by providing the Accused '860 Products and instructions to enable and

facilitate infringement, knowing of, or being willfully blind to the existence of, the '860 Patent. On information and belief, HPE specifically intends that its actions will result in infringement of at least one or more claims of the '860 Patent, or subjectively believe that their actions will result in infringement of the '860 Patent, but took deliberate actions to avoid learning of those facts, as set forth above.

93. Additionally, HPE contributorily infringes at least one or more claims of the '860 Patent by providing the Accused '860 Products and/or software components thereof, that embody a material part of the claimed inventions of the '860 Patent, that are known by HPE to be specially made or adapted for use in an infringing manner, and are not staple articles with substantial non-infringing uses. The Accused '860 Products are specially designed to infringe at least one or more claims of the '860 Patent, and their accused components have no substantial non-infringing uses. In particular, on information and belief, the software modules and code that implement and perform the infringing functionalities identified above are specially made and adapted to carry out said functionality and do not have any substantial non-infringing uses.

94. At least as early as the filing and/or service of this Complaint, HPE's infringement of the '860 Patent was and continues to be willful and deliberate, entitling Commstech to enhanced damages.

95. Additional allegations regarding HPE's knowledge of the '860 Patent and willful infringement will likely have evidentiary support after a reasonable opportunity for discovery.

96. HPE's infringement of the '860 Patent is exceptional and entitles Commstech to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

97. Commstech is in compliance with any applicable marking and/or notice provisions of 35 U.S.C. § 287 with respect to the '860 Patent.

98. Commstech is entitled to recover from HPE all damages that Commstech has sustained as a result of HPE's infringement of the '860 Patent, including, without limitation, a reasonable royalty.

PRAYER FOR RELIEF

WHEREFORE, Commstech respectfully requests:

A. That Judgment be entered that HPE has infringed at least one or more claims of the Patents-in-Suit, directly and/or indirectly, literally and/or under the doctrine of equivalents;

B. An award of damages sufficient to compensate Commstech for HPE's infringement under 35 U.S.C. § 284, including an enhancement of damages on account of HPE's willful infringement;

C. That the case be found exceptional under 35 U.S.C. § 285 and that Commstech be awarded its reasonable attorneys' fees;

D. Costs and expenses in this action;

E. An award of prejudgment and post-judgment interest; and

F. Such other and further relief as the Court may deem just and proper.

DEMAND FOR JURY TRIAL

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, Commstech respectfully demands a trial by jury on all issues triable by jury.

Respectfully submitted,

Dated: August 8, 2019

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and
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